‘Place of Dying Calves’: On The Longitudinal Nature of Ethnography

Abstract
There is an important longitudinal dimension to ethnography that involves getting to grips with the emic perspectives of those being studied and folding these perspectives back into the analysis. Longitudinal engagement with the field is episodic and multi-layered, and ethnographers build up overall experience across multiple encounters, which eventually cohere to generate a wider and deeper understanding of the field site than is possible from observations alone. How do these two scales interact, and how can they be made useful for HCI? I provide one perspective on these issues through a reflection on personal experience of working in Ladakh, and identify challenges for longitudinal HCI work to address. These challenges need to be addressed in the context of interdisciplinary communities of practice that reach outside of the HCI community.

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H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms
design, human factors, theory
**Introduction**

Ethnography is “the study of the culture and social organization of a particular group or community, as well as the published result of such study” [1]. As a practice, ethnography involves not just reviewing literature, identifying gaps, developing research questions, obtaining IRB clearance, gaining entry to the field, collecting and analyzing data, and ‘writing up,’ but getting to grips with the emic perspectives of those being studied, and folding those perspectives back into the wider analysis. A key method is participant observation, which focuses on spending time in the subjects’ natural environment, observing and collecting data through observation, field notes, interviews, cultural artifacts, etc. [9]. Ethnographers therefore have both a short- and a long-term engagement with the field. How do the two scales inform each other? How are the products of this engagement received by other researchers? I provide an overview of these issues in relation to the study of technology by reflecting on my personal experience in and of Ladakh.

**Encountering Ladakh**

The once independent kingdom of Ladakh is now small autonomous province in the northeastern corner of the northern Indian state of Kashmir. The name is derived from the Tibetan for ‘Land of High Passes.’ It is a high-altitude desert that includes steep mountain ranges and deep valleys, shielded from monsoon rains by the southern Himalayas. Much of the sparse population lives in small villages strung along the streams and rivers that feed into the central Indus valley. Complex irrigation canals carry glacial meltwater, sometimes from miles away, to terraced fields of hardy winter barley. During my initial serendipitous visit to Ladakh in the early 1990s. I became interested in the people, the mountains, and the small mud-brick villages perched precariously on the edge of existence along the steep valley sides, often under the gaze of even higher monasteries. As a landscape it seemed to manifest an organic social and cultural whole, but in an occluded way that invited further investigation and decryption.

In and around the main town of Leh (elevation 10,000 feet, population 20,000 people), in addition to the usual influx of summer tourists, there was a small coterie of long-term visitors, people with multiple Indian visa stamps in their passports: NGO workers, students of Buddhism, volunteers, researchers. The latter included several people doing what they referred to as anthropological fieldwork, which appeared to consist of sitting in cafes, writing in notebooks, pecking at early laptops, and disappearing for days or weeks at stretch. They were happy to talk about Ladakh, and I listened. I began trying to make sense of the architecture, the villages, the farming and ritual cycles, the landscape, the multi-layered culture (primarily Tibetan but with elements of prior Central Asian and modern Hindi culture), and in particular the layered and syncretic Ladakhi conceptions of place, space, time, and cosmos. At some point, I realized that many of my initial understandings of these phenomena were wrong, and that as a result I was asking the wrong questions; and after further time, I began to understand the right sort of questions I needed to ask in the first place. The disparate collection of observations in my notebooks slowly began to cohere. There was a crucial longitudinal dimension to ethnography, I realized; spending more time in the field meant not just that you collected more and more data, but that you learned to (re-)approach your existing data in new ways, based on evolving understandings of the field site itself.
The Place of Dying Calves

The horizon dominates the landscape in Ladakh, ranging from small foothills behind a village, to the 20,000 feet-high ranges on the either side of the Indus valley, and various features along it are often named. One mountain name that occurs in several places is (in transliteration from the Tibetan) be ’u tho shi sa, that is, 'place of dying calves.' For an anthropologist, this name automatically invites questions. What does it mean? Why do calves die here? What happens to them? As some Ladakhis practice transhumance, maybe there are steep ravines, or poisonous plants, or wild animals (wolves? the elusive snow leopard?) in the area. However, cows are required in the valleys as farm animals (it is the hardier dzo (a cow-yak hybrid) which is sent to summer pasture). They are well looked after; in the traditional houses, they often live in the basement, which shelters them from the bitter winter cold and also provides heat for the rest of the house. More speculatively, perhaps, the name might be a clue that at some unspecified time this was an area for a hitherto unknown cult of animal slaughter, perhaps for fertility, perhaps to a mountain deity. While ethnographically exciting, this seems unlikely.

There is however a clue in the name. The Tibetan word tho can mean 'marker,' including in the sense of a calendrical marker, and in fact, this particular name for a mountain refers not to a point in space, but to a point in time, the time when calves die. As noted above, Ladakh is a high altitude desert, with a short growing season. Timing an agricultural calendar is important, but with the exception mainly of Buddhist monks, who had access to libraries of painstakingly xylographed religious and philosophical texts, most pre-modern Ladakhi society was not literate, and did not share written calendars. Anyway, the official Tibetan calendar is a lunar, with intercalary months, and is not useful for this type of reckoning. Ladakhis did notice however that the position of sunrise and sunset along the horizon changes over the year, ranging from the winter solstice in the south to the summer solstice in the north and then back again [7]. The horizons in Ladakh, easily observed and irregular, thus provided a convenient rule against which to mark the progress of the sun and the passage of time during the year. Mountain names were calibrated to particular dates (such as the peak where the sun (re)turns at winter solstice) and also to the average climate at that date. Peaks named be ’u tho shi sa mark the position of the sun on its journey north from winter solstice to summer solstice at about the position/time in the second half of February when the weather is the coldest, and calves are most likely to die, wherever they are.

The explanation of an apparently isolated datum of an intriguing mountain name is therefore embedded within multiple layers of meaning. To tell the story of be ’u tho shi sa requires knowledge of at least the following: physical geography; farming practices; climate patterns; environment and ecology; user-centered solar astronomy; lunar calendars; village social organization, and the fact that the job of observing solar calendars is hereditary and allocated to a specialist in a specifically named house; and the related fact that households are corporate in Ladakh, and Ladakhis practiced polyandry, and did not practice primogeniture, which meant that households were not partitioned and retained their identity over generations; pragmatic and sacred aspects of village geography, and the fact that there may be a special solar calendar viewing place in the village; Ladakhi winter solstice
Festivals involving ritual cleansing, symbolic passage between the old and new year, points of rupture in the cosmos, bonfires, fake armies and battles, characters dressed in goat skins, ritual bathing in freezing creeks, the consumption of vast quantities of the local beer (which in itself has ritual significance); and so on [2].

The Ladakhi name be 'u tho shi sa does not exist on its own, but as part of a wider series of explanations that is regressive in nature (one explanation leads to another, and then to another, and so on). To begin apprehending how these various meanings are related, and to follow the regression in explanation, required an understanding not just of the individual elements, but of how they fitted together, supported each other, and were made sense of in terms of each other. The paragraphs in this section are therefore not descriptions...
Jokes are complex cultural constructions. Many depend on exploiting the sense-making dissonance between the set-up (which takes the listener in one direction) and the gag (which pulls the rug out, so to speak). Understanding a joke requires appreciation of this dissonance. I feel I have gained some understanding of a community, when I find their jokes funny.

A Ladakhi farmer had a beautiful orchard of chuli (small apricot) trees) behind his house. It was a good growing season and the chuli were ripening well, but someone was stealing the fruit. One day, the farmer heard some branches rustling, and spotted a leg dangling from a tree. He pulled it, and a small boy fell out, chuli spilling from his robe. "Why, you ..." shouted the farmer. "Just you wait until I tell your me (grandfather)." "That won't do any good," retorted the boy. "Why not?" asked the farmer. "Because he's in the next tree," said the boy.

Of data; they are a narrative of a particular understanding of Ladakh gained over time.

Longitudinal Studies of Technology
Ethnographic research often includes the translation and interpretation of cultural data. However, cultures are not commensurate [8], and the number of points of translation is potentially rather large (as Steve Martin said, "Boy, those French, they have a different word for everything"). A phrase book does not necessarily help one to hold a meaningful conversation in another language, or even to tell a joke (such as the one in this sentence). An important part of ethnography is therefore the 'invisible work' [5] contained in the ongoing conversation between the researcher, subjects, field site, and data, which shapes the researcher's understandings of the meanings inherent in the world of the subject. This conversation emerges over time, as does the way in which the researcher understands and theorizes the field site and the connections between data. Ethnography is a social scientific technique (episteme), but it is also a craft (techne), a form of practice, skill, expertise, etc., that includes not just the ability to collect, enumerate and describe 'the facts,' but the skill and expertise to integrate those them into a narrative that mediates between different cultures [6], what Wittgenstein has called forms of life and language-games [14, 4]. Ethnography is a way of knowing and recognition, as well as a form of knowledge [10].

Metaphorically, longitudinal studies of technology take place within landscapes of users, organizations, technologies, technological frames, work practices, etc., across which the researcher travels to gather data over time. Michael Seadle, an ethnographer-historian-librarian, puts it this way: "My research method has been, in effect, to live as a native among the tribe of librarians for the last thirty years without quite losing my perspective as an observer," [12] and I would argue that I have been doing the same thing with digital repositories since 2000. In such work, therefore, where does one study end and another begin, and where do the findings reported in one place come from, given that they may draw on years of experience and (re)interpretation in the field? Longitudinal research with technology does not consist of tidy sites and encounters. Data are gathered on multiple field trips, often not with the intent of supporting the narratives that they eventually wind up in. Fieldwork affects how the field site is perceived, which affects how data is gathered, and so on. The apparent certainties of a bounded field site, sample size, defined start and finish dates, etc., frequently required by institutional research boards and journal reviewers, begin to blur. As in Ladakh, the links between the village and wider landscape are complex, and the subjects’ explanations of these relationships can be situated and regressive. This is not necessarily a problem, and the discussion of uncertainties can be very useful. However, while multi-layered, reflexive and integrative narratives are acceptable (and even desirable) in anthropology, with one research benchmark being the monograph, they are harder to pursue in HCI, where such description makes less sense in the context of shorter and more self-contained conference papers and journal articles (there are few research monographs in HCI, or library and information science for that matter). There is often simply not the room to report ethnographic research, which presents significant challenges for deciding to initiate such research in the first place.
Conclusion
For the purpose of looking forward to the development of theory and practice for longitudinal ethnographic research in HCI, the following initial challenges are therefore identified [c.f. 11]:

• What unit(s) of analysis, such as 'culture,' are appropriate for the research?
• How can 'longitudinal' be usefully defined and accomplished, given that much work is carried out in the interstices of other commitments?
• How can more reflexive narrative voices [13] be made more acceptable in HCI research?
• How can ethnography be presented as a valid research method to funding agencies?
• What are the implications for 'implications' [3], and how can the loop between findings and design be closed in ways appropriate to and valorizing of longitudinal research?
• What venues and disciplines are important for reporting research (monograph, conference paper, journal article, etc.) - what is accepted, where and why?
• How can such research be better explained to institutional research regulatory boards?
• How can interested HCI and technology researchers form a community of practice to go forward with this work?

These and other challenges will need to be addressed in interdisciplinary communities of practice that reach outside of the immediate HCI community.

References